

The impact of teaching methods on the performance of geography students in some selected public secondary schools in Zaria local government area, Kaduna State, Nigeria

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Abstract

Purpose: This study analyzes the impact of teaching methods on Geography students' performance in Zaria Local Government Area, Kaduna State, Nigeria. Six senior secondary schools: AlhudaHuda College, Barewa College, Government Secondary School Kofar Kibo, Government Girls Secondary School Kofar Gayan, Government Girls Secondary School Pada and Government Girls Secondary School, Kongo were sampled.

Research methodology: 423 questionnaires were administered to respondents. Descriptive statistics and inferential statistics using SPSS version 23 were used to analyze the data.

Results: The results revealed that the demonstration method of teaching was the most used by teachers ahead of others (44.6%). The results also revealed that 28.3% of the students who responded say they did not know the teachers' actual method in teaching them.

Limitations: The study used not only Geography teachers as respondents, but also other subjects related to Geography. Additionally, the study covered only Zaria Local Government Secondary Schools. It can be done with only Geography teachers' respondents in a larger scope like a state or even a country.

Contribution: The study will help the Ministry of Education responsible for secondary education and all stakeholders to understand the reality of state of Secondary Education in the study area to address the problems. Additionally, the study can be replicated in other study areas with similar characteristics.

Keywords: *Impact, Teaching method, Senior secondary schools*

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1. Introduction

The main reason we teach is to bring about change in the learners' behavior. Change in learners' behavior is the work of teachers. Teachers have a number of techniques or methods to choose from depending on the need and circumstance. Traditionally, teachers tend to dominate the learning process in the class (teachers-centered approach) instead of allowing the students or learners to dominate (learner-centered approach). Recent best teaching methods give more emphasis to learners than teachers. There are many teaching methods to use and the choice of methods is with teachers for their

students. However, many teachers find it challenging to make the right decision regarding teaching methods, which affects learning massively ([Moss, 2017](#)). The concept of teaching method is vast; it comprises the process, whether pedagogical or andragogical. It is up to the teacher to choose the method that suits them, but whatever method one chooses, one must consider the students need, the class size or students number and the curriculum. The two traditional techniques known which have a number of classes under them, are teachers-centered approach and the students-centered approach ([teach.com](#)).

Substantial studies on the effectiveness of teaching techniques on student performance reveal contrasting results. However, [Adunola \(2011\)](#) posits that teachers need to get conversant with different teaching techniques and strategies to make a better decision for better results. According to [Ayeni \(2011\)](#) teaching results can best be assessed by the quality of learners produced and teaching helps learners produce effective results. [Sheri \(2008\)](#) posits that students understand better when teachers apply different strategies. The strategies are needed to be combined from one topic to another until the best strategy is identified. Thus, teaching is all about understanding the student's condition, level and need. Testing this argument, [Asikhia \(2010\)](#), drawn 135 students and 50 teachers from secondary schools in Ogun State, Nigeria. Using questionnaire to acquire data, the study also used both qualitative and quantitative technique to analyze the data and the two contrasting results were as follows: 1. Teachers said that the school environment and teacher's qualification have no impact on student's bad performance, but teaching method. 2. Students respondents saw this strange and said that teacher's qualifications and school environment have an impact on student's performance. Additionally, a study conducted by [Moradeyo \(2011\)](#), examined the impact of three teaching methods on the performance of Business Studies students' performance in colleges of education owned by state governments in southwestern Nigeria. Three methods: guided discovery, lecture method and gender, were applied and six colleges of education were used with study sampled standing at 1764, which was narrowed down to 64 students. A questionnaire was used in data collection and inferential statistics was employed to analyze the data. The result reveals that guided-discovery teaching strategy has a high impact on teaching accounting principles, a course under Business Studies in the study area.

In another study, [Luntungan \(2012\)](#) explored the effects of teaching methods and students' attitudes on Indonesia's academic performance. The study used 135 participants from an Indonesian university. A comparison was made between teaching a large class and teaching a small group and the result shows that students taught in small groups performed better. In other words, small groups and microteaching strategy is more effective than the conventional way method of teaching. In the same vein, [Briggs \(2019\)](#) determined performance of Business Studies students in Port Harcourt Local Government Area, Rivers State, Nigeria. The study used both qualitative and quantitative technique of research. A total of 100 respondents were drawn from a junior secondary school. Two methods of teaching, the lecture way method and discussion method, were used to collect the data or responses, and inferential statistics was used to analyze the data. The result reveals that there was a high relationship between the two methods used in the study.

On the other hand, Geography is one of the oldest subjects that used different teaching techniques or strategies. Geography as a discipline was derived from two Greek words (GEO and GRAPHO). Geo means earth, while grapho means description. Thus, Geography is a description of the earth. A study of earth and its features. The features of earth are many: soil, vegetation, mountains, plains, valleys, weather and climate, population, gender, transportation, economy, and so on ([Kozah, 2013](#)). Perhaps due to its wide area of coverage, students' performance in Geography in Secondary Schools in Zaria Local Government Area (LGA) have not been encouraging in recent time, although there are many reasons for the dismal performance, one of the main reasons identified was the methods of teaching used.

Previous work done on teaching techniques were done in tertiary institutions not secondary; secondary schools, but on other subjects not Geography or different locations not Zaria. In light of the above, this study is aimed at analyzing the impact of teaching methods on performance of Geography Students in Some Selected Public Secondary Schools in Zaria LGA, Kaduna State, Nigeria.

Three main objectives are set in this study, they are to:

- i. find out teachers qualifications
- ii. identify techniques used in teaching Geography and their effectiveness in the study area
- iii. identify students responses with respect to teaching methods

2. Literature review

2.1. Methods and strategies of teaching geography and other subjects

There are two major methods and strategies used by teachers when passing instructions to students. They are students (learners)-centered method and teachers (instructors)-centered method.

2.1.1 Students-centered method

This method is aimed at given students more chance to participate in contributing or dominating. Students are given about 70% chance while a teacher takes the remaining 30%. In some cases, students are given three-quarters of the class session, 75% against the 25 for teachers. This method is often applied when class size is not large. There are many ways these can be done. It can be done through questions and answers, discussion methods, brainstorming methods, presentations, and seminar methods.

2.1.2. Question and answers method

Questions and answers is a process of passing instructions to learners by allowing the students to ask questions or to dominate session based on the topic or issue under review ([Moss, 2017](#)). This is an effective way for all students to participate whether they are introvert or extrovert.

2.1.3. Discussion method

Discussion method is a teaching method that also refers to an open-ended teaching method where students and teachers share ideas. It is one of many student-centered approaches where students are expected to dominate teachers give the class session and feedbacks. This method enhance teaching significantly as it allows students to contribute although extrovert students tend to dominate session, it gives even the introvert students a chance to be listened. The major disadvantage of the discussion method is that it consumes time that 30 to 40 minutes given for a class activity might not cover a behavioral objective.

2.1.4. Brainstorming

Brainstorming is a teaching strategy that allows students to think deeply to find a solution or analyze issues at hand. This method helps to develop skills that are often found when critical thinking is involved. Brainstorming method like discussion method consumes a lot of time that if not well organized, managed and maintained, students might end up learning nothing. Therefore, for students to get it right there should be a lot of teacher's intervention to moderate the cause of action. But it is advantages are seen in the long run. In other words, it is not immediate result oriented strategy, but long time result oriented strategy.

2.1.5. Presentation method

Presentation teaching method is a teaching method where learners are given topics to do research on and find out the results by themselves and present it to class. This method is effective for it encourages cooperation between different categories of learners in a class. Often in class, there are slow and fast learners, the fast learners help the slow learners to understand content and context before presentation time so that the group might not be affected negatively. Teachers often call any member of a group to present the work on behalf of the group not minding whether he is a slow or a fast learner. This method works sometimes because it encourages students to study hard after class against the time for their presentation. The main advantage of this method is it encourages teamwork. However, the main disadvantage of this method is that it is time-consuming ([Brigg, 2019](#)).

2.1.6. Seminar method

Seminar method of teaching is a teaching strategy that resembles presentation method. Students are often grouped and a topic or assignments are given to stimulate debate and discussion among learners before the seminar presentation. This method helps learners to comprehend and be able to evaluate issues at hand. This method encourages all learners, whether slow or fast learners and introvert or

extrovert learners, to participate. This method like presentation method helps learners develop the skills of report writing. Although the method encourages student's participation, it put some learners under immense pressure especially the shy type o learners. In addition, this method consumes time too as its counterpart, presentation method. Besides, the extrovert learners might dominate the session even if their contribution is little or nothing during research and report writing ([Brigg, 2019](#)).

2.1.7. Field trip/work

Fieldwork is the teaching method that coveys students outside the four corners of the classroom, to expose them to various problems ranging from observation, identification, measurement, data collection and analysis and interpretation of geographical phenomena. This method is relevant in teaching physical, human and practical geography.

2.1.8. Teacher-Centered

Teacher-centered teaching methods are methods of teaching where teachers dominate the class session instead of students. Few students are allowed to participate under this method. This method does not guarantee effective learning, but very effective when class size is large. There are many ways this method is applied, such as the lecture and demonstration method.

2.1.9. Lecture method

Lecture way method of teaching is dictatorial where a teacher speaks to students with little or no room for student's involvement or participation. Some teachers read from their notes without given practical example which is often difficult for students to learn. However, this method is a very effective way of covering large area. The method can be useful where contact session is minimized like this period of COVID-19 pandemic. It is main disadvantage is that individual differences are not given due consideration that every student is seen as a student not minding whether they are slow or fast learners ([Moradeyo, 2015](#)).

2.1.10. Demonstration Method

The demonstration teaching method is one of the most used secondary schools strategies in Nigeria and the study area in particular. It is a practical way of showing students how things are done. This strategy is good because it is often used teaching aids to model or mimic reality. For instance, in teaching continents of the world, teachers are expected to bring the world map and a globe so as to demonstrate where the seven continents of the world; Africa, Antarctica, Asia, Europe, North America, South America and Oceania (Australia) are located. This method is also time consuming but gives result immediately unlike others like brainstorming that requires teacher's moderation from time to time. The disadvantage of this method is that, teachers might dominate a class session ([Moradeyo, 2015](#)).

2.2. Factors that influence the choice of teaching methods in geography

There are many factors depending on need. The following are some of them:

1. Students learning and its impact in teaching strategies that are responsive to the needs and aspirations of students such as language, religion, culture and socioeconomic background.
2. Organization of content in effective way as well as concepts and topics understanding.
3. Use of curriculum, assessment and scheme of work effectively.
4. Knowledge and understanding of literacy and numeracy teaching strategies and their application in teaching areas effectively.
5. Use of teaching techniques that incorporate the use of Information and Communication Technology (ICT) to expand curriculum learning opportunities and new techniques in place. Some experts called it use of educational technology learning materials.
6. Setting of learning goals that provide achievable challenges for students with different characteristics (slow and fast learners; and introvert and extrovert).
7. Planning of lesson sequences using knowledge of student learning, content and effective teaching strategies
8. Including a range of teaching strategies such as those listed above that might come from either students-centered method or teachers-centered method.
9. Choosing a range of resources including ICT that engage students in their learning.
10. Choosing of verbal and non-verbal communication strategies to support student engagement.

11. Use of techniques that can be used to evaluate teaching programs to improve student learning.
12. Use of techniques to help all-inclusive strategy to allow for all students participation and engagement in classroom activities.
13. Choose strategies that can manage classroom activities and provide clear directions.

In order to achieve learning goals, teacher must understand the teaching techniques available all the time together with their advantages and disadvantages. The reason each is applied and the circumstances they are applied for. The size of class, the ages of learners, their previous experience and time are also looked into ([Toovey, 2020](#)).

2.3. Medium of instructions

Different countries use different media for instruction in schools. Some countries use English, others French, Arabic, Chinese, Russian, Spanish and so on. Many countries use languages as native speakers while others as second language. In United Kingdom, United State, Australia and few others, English is being used by native speakers, while in African and some Asian countries like Nigeria, Ghana, the Gambia, Zambia, India and so on use it as second language. Many French speaking countries use it as second language and media of instructions in schools in their respective countries either in Africa or other parts of the world. Some of them include: Niger, Benin Republic, Togo, Mali, and Burkina Faso among others. The Middle East countries like Saudi Arabia, Iraq, Yemen, Oman, Jordan, United Arab Emirate and others use Arabic as a media of instructions in their schools. Spain and its colonies most in America use Spanish as a media for instruction in schools. Countries like Brazil, Argentina, Colombia, Ecuador, Bolivia, Chile, Paraguay, Uruguay and Peru are some examples.

However, it has been argued that many second language users are not proficient enough to learn lessons and a huge gap exist between native speakers and second language users in schools. There are several media of instruction at schools. For instance, the use of English as a media for instruction in schools in non-native English countries inhibits learning experience from both teachers and students. This could be the reason why some primary school pupils at lower level (Primary 1-3) are allowed to use vernacular when passing instructions in school ([Wolfaardt, 2001](#)).

2.4. Reasons for teaching geography in secondary schools

There are several reasons why Geography is taught. Notably are:

2.4.1. The need for selective teaching

A certain amount of knowledge of geography is essential if one wants to locate geographical features. It is necessary for the inclusion and selection of items to be studied. The aim of selective teaching is not all items in school that should be studied, the study of geography help curriculum expert select useful items for study in order to add value to the society.

2.4.2. Purpose of pursuing

The teaching of geography exposes students to challenges that require a solution. This can be achieved by really embarking on research. It could be in the form of research topics. For instance, the harnessing of resources, the cooperation of the agronomist, geologists, sociologists, engineers, and above all geographers who have tremendous contributions to make in the development of territory is required. The essential purpose of Geography is to study the relationship between man and his environment in which they exist. Geography is thus, presented as a synthesizing science, but an essential primary to this synthesis is the analysis of phenomena in terms of reciprocal interaction and utilization of habited and habitable space.

2.4.3. Dynamic geography

Geography is a science that must be envisaged from a dynamic point of view, in which present and future problems are described based on the development that led to the existing situation. However, the chain's latest link in the succeeding link must be made as strongly as possible. In the light of this, Geography whether concern with country or worldwide phenomena will obviously demonstrate the need for spread cooperation between people of the earth. Given man and his environment's dynamic nature, the Geography teacher should produce students who will understand their environment while comparing phenomena to come out with good judgment.

2.4.4. Towards international solidarity

The teaching of Geography will therefore help to instill in the child valuable ideas of solidarity that exist between all men. This is regarded as international solidarity by the United Nations Educational Scientific and Cultural organization (UNESCO). A trained geographer knows the regions of the world as being independent. Thus, no one can set into motion the need for harmonious co-existence on a sounder foundation than a trained geographer. Although the world peace has some hollow ring (deficiencies), in spite of the much excellent teaching of Geography in schools, what Geography tends to bring home is peace and harmony by providing solution to crisis, through the cultivation of deep tolerance, understanding, patriotism, good will and good citizenship. The noble job of the Geographer would set the world right and make it a better place for us all.

2.4.5. Passing examination

This involves the accumulation of knowledge to enable students to pass the examination. It is expected of Geography teachers to impart knowledge at whatever level to both slow and fast learners. This will prepare them to pass geographical examination at the end each semester or term in public examinations such Senior Secondary Certificate Examination (SSCE), West African Senior Secondary Certificate Examination (WASSCE), National Examination Council (NECO), National Business and Technical Board (NABTEB), Unified Tertiary Matriculation Examination (UMTE)/Joint Admission Matriculation Board (JAMB), General Certificate Examination (GCE) A level and so on ([Effe, 2013](#)).

2.5. Application of teaching methods in geography

Geography is one of the widest subjects. It has areas like geomorphology, climatology, pedology, biogeography, environmental studies, population and settlement studies, regional geography and map reading.

2.5.1. Geomorphology

This is the study of landforms, including their history and origins. It also provides a precise description of their basic forms and spatial variability. Landforms evolve over a considerable period of time and are usually consequence upon the prevalence over a landscape of certain geomorphologic process. These processes could either be exogenic i.e. those that act on the earth's surface or endogenic i.e. those operating beneath the earth's surface. In the 19th century, geomorphology was placed on general geomorphology where landforms were considered natural of events rather than ordered scientific occurrences ([Akut, 2013](#)). Since geomorphology study landforms like valleys, mountains, weathering, mass wasting and things like that, fieldwork and demonstration technique as well as presentation or seminar would be beneficial techniques here.

2.5.2. Climatology

It is a study of weather and climate that occupies an important position within the broad field of environmental science. Issues like atmospheric processes are part and parcel of what is discussed here. Things like biosphere, hydrosphere, lithosphere and exosphere are described in details. Since this area is more of abstract, demonstration method, presentation method and fieldwork will be good. In the fieldwork, the weather station with all its elements such as barometer for measuring pressure, thermometer for measuring temperature, rain gauge for measuring rainfall, wind vane for measuring wind direction or anemometer for measuring wind speed can all be studied ([Yakubu, 2013](#)).

2.5.3 Pedology (Soil)

Soil is the topmost layer of the earth surface that plants depend on for essential nutrients and it has properties due to the combined effects of climate and living organisms on the parent rock and relief over tolerable periods of time. This Geography area can be taught using the combination of demonstration method, enquiry or questions and answers method and fieldwork ([Yakubu, 2013](#)).

2.5.4. Biogeography

Biogeography is one branch of Geography which is both biological and geographical science. The branch studies the mechanisms through which plants and animals originate, evolve and organize themselves into groups. In other words, biogeography is seen as the study of plants and animals in relation to geographical distribution on the earth's surface. This Geography area can be best taught

using the combination of fieldwork, discussion and questions and answers or inquiry method ([Dyaji, 2013](#)).

2.5.5. Economic geography

This is Geography in relation to the production, allocation, distribution and consumption of goods and services. Economic geography has a system of production often called primary, secondary and tertiary systems. The primary production deals with creating things directly from nature such as agriculture, hunting, fishing, lumbering and others. Secondary production deals with improving, and increasing the values of primary products. For example, cotton is improved to textile materials; timber is converted to plywood, etc. Tertiary production is the commercialization of services. The best geographic method to teach economic geography is to use demonstration, presentation and perhaps enquiry method or questions and answers ([Kozah, 2013](#)).

2.5.6. Population geography

Population can simply be defined as the sum total of the human population (resources) available in a political or geographical area at a given point in time. It is a function of development as the exploitation of natural resources, growth of commerce, and industry depend largely on the population. Population Geography can be best taught using discussion method, demonstration method, inquiry method, questions, and answers method ([Effeh, 2013](#)).

2.5.7. Map reading

A map is the Geographers' telescope by which places, directions and bearings of physical and human features is shown. Best method for teaching map reading is a combination of discussion, demonstration and questions and answers methods ([Yakubu, 2013](#)).

2.6. Research hypothesis

For the purpose of this study, this hypothesis was formulated:

Hypothesis: There is no significant impact of teaching method on performance of Geography Students in Zaria LGA, Kaduna State, Nigeria.

2.7. The study area

Zaria Local Government Area is one of the 23 LGAs in Kaduna State, Northern Nigeria. It is located between latitudes 11° 03' - 11°10' North and longitudes 7°30' - 7° 42' East of the Greenwich Meridian. The town is almost centrally located in Northern Nigeria. It is also located in the central plain of the Northern Nigeria highlands standing at an average height of 670 meters above sea level. The study area is accessible from Jos, Sokoto, Katsina and Kaduna by road. This means the study area has access to the northern and southern parts of the country. Intercity transport is conducive with commercial buses, tricycles and motor cycles available ([Abdulkadir, 2014](#)). The mean monthly temperature is about 25 °C, but it is highest between the months of March and May, which represent the hot dry period. It is lowest in December to January reaching about 11°C sometime at night. However, the mean minimum and maximum vary greatly from year to year. 11 °C is the mean minimum and up to 38 °C for mean maximum monthly temperature (www.abu.edu.ng).

Zaria region is an extensive peneplain developed in crystalline metamorphic rocks of the Nigeria basement complex. The soil type is highly leached ferruginous tropical soils, developed on weathered regolith overlain by a thin deposit of windblown silt from the Sahara desert during many decades of propagating the tropical continental air mass into the area. Zaria is also a major city. It is the headquarters of Zazzau, one of the original seven Hausa city-states. Today, it houses one of the two campuses of Ahmadu Bello University and is home to a number of prominent Nigerians. It covers an area of 563 km² (217 sq mi), Total population 408,198 with Density 730/km² (1,900/sq mi). [Population census \(2006\)](#). Other economic activities are trade, manufacturing and education. See figure 1.

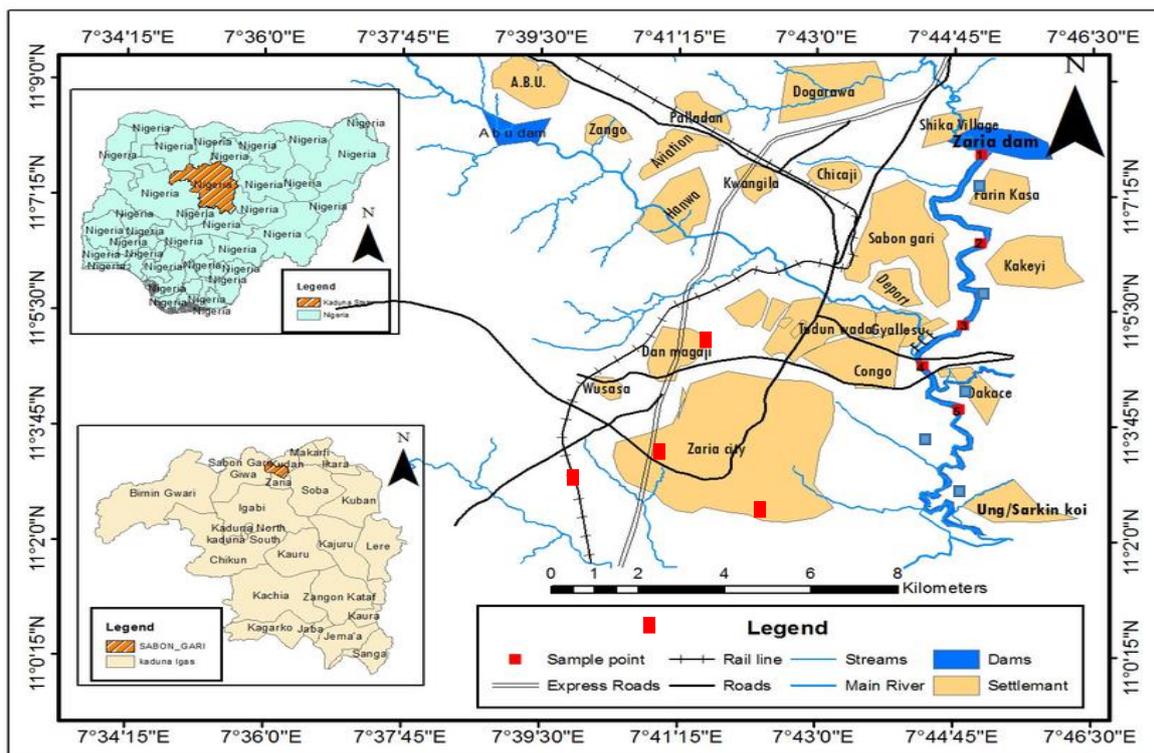


Figure 1. The study area in the context of Kaduna State, Nigeria

3. Research methodology

3.1. Sample size

In determining the sample size, which has been asserted that if the population is a few hundreds 40 – 50% of the population could be used. If the population is many hundreds, 20% sample could be used and if the population is several thousand then 10% or less could be used (Martínez-Mesa et al., 2014). 422.9 respondents were used in the schools under review. This was determined using the sample size determination formula as follows:

$$N = \frac{\text{total sample size} \times 10}{100}$$

Where N = Sample size

Percentage to be used is 10%

$$N = \frac{4229 \times 10}{100} = 422.9.$$

Thus, the sample size used is 423 at 95% confidence interval.

3.2. Research population and sampling technique

Six secondary schools were purposively chosen among the secondary schools in the study area because of their large population size to give room for choosing good students for desire results. The selected secondary schools, of which three were male, are: Alhuda Huda College, Barewa College and Government Secondary, Kofar Kibo. Three female schools, namely: Government Girls Secondary School, Kongo, Government Girls Secondary Schools Pada and Government Secondary School, Kofar Gayan.

SS I, II and III students were stratified randomly sampled for 367 students that responded to the questionnaires. In addition, 56 teachers were administered the questionnaires involving 18 Geography

teachers The remaining 38 questionnaires were administered to other subject teachers related to Geography. Thus, Biology, Agricultural Science, Chemistry, Physics and Economics subjects were considered purposively taken.

3.3. Source and methods of data collection

Data were collected through questionnaire administration and interview. A total of 423 questionnaires were administered to both students and teachers. Interviews were also conducted to substantiate what is contained on the questionnaires. All the questionnaires were returned because they were administered and collected at schools on the spot.

4. Results and discussion

Table 1. Summary of respondents from six selected schools

Schools Name	SS1	SS2	SS3	Teachers	Total
Government Secondary School Tukur-Tukur	20	26	30	10	86
Alhuda-Huda College	27	31	32	11	101
Government Girls Sec. Sch. Kongo	20	17	12	07	56
Government Girls Sec. Sch. Kofan Gayan	17	13	11	08	49
Government Girls Sec. Sch. Pada	21	19	14	10	64
Barewa College	12	22	23	10	67
Total	117	128	122	56	423

Source: Field Survey (2020)

From Table 1, Alhuda-Huda College had the highest number of respondents, 101 (27.5%) while Government Girls Secondary School Kongo had the lowest number respondents, 49 (13.6%). This might be attributed to the fact that more male students offered Geography than female students in the study area. In addition, some female students drop at the Junior Secondary level and some before reaching the end of SS III for marriage and other reasons.

Table 2. Categories of the respondents

Respondents	Frequency	Percent (%)
Teachers	56	13.2
Students	367	67.8
Total	423	100.0

Source: Field Survey (2020)

There were two categories of respondents, teachers to whom 56 questionnaires were administered, representing 13.%. Then students, were 367 (68%) were administered. The proportionate technique was applied here in the distribution between the two groups. This agrees with the study of [Asikhia \(2010\)](#) in Ogun State, Nigeria where more students responded than teachers.

Table 3. Gender of respondents (Teachers)

Sex	Frequency	Percent (%)
Male	32	57
Female	24	43
Total	108	100.0

Source: Field Survey (2020)

Table 3 reveals that more male teachers responded 32 representing (57%) participants against female teachers 24 representing (43%). This aligns with the students where more male students responded than female proportionate to their number. This also aligns with the Kaduna State public service system in northern Nigeria, where male staff dominates in accordance with norms and culture of the study area.

Table 4. Teachers' level of education

Level of education	Frequency	Percent (%)
National Certificate in Education (NCE)	33	59.0
First Degree	17	28.6
MSc Degree	7	12.5
Total	108	100.0

Source: Field Survey (2020)

Table 4 reveals that 33 teachers, as responded by the participants representing 59%, hold National Certificate in Education (NCE), the minimum teaching requirement in Nigeria, while seven representing 13% have an MSc degree. It is obvious, more years and more effort are needed to acquire a first degree and MSc degree, hence the high percentage of the NCE holders. Student's performance is likely to improve by having teachers with higher teaching qualifications than NCE. However, [Asikhia \(2010\)](#) in his study conducted in Ogun State, Nigeria found that teachers were of the opinion that student's performance has nothing to do with teacher's qualification.

Table 5. Teacher's years of working experience

Years	Frequency	Percent (%)
Less Than 5 Years	06	10.7
6 – 10 years	15	23
11 – 15 years	11	19.6
16 – 20 years	11	19.6
21 years and above	13	26.8
Total	108	100.0

Source: Field Survey (2020)

From Table 5, teachers with 6-10 years working experience had the highest number 15 (23%), while those with less than five years were only 6(10.7%). Teachers with 11-15 years and 16-20 years were jointly 11(19.6%). This indicates that few teachers with the lowest qualification have been recruited

into teaching in recent time. The poor academic performance of Geography students might not necessarily be connected with new teachers.

Table 6. Teaching methods used in teaching geography and their usage and effectiveness

Teaching Methods	Strongly Agreed	Agree	Undecided	Disagree	Strongly Disagree
Question and Answer	12(21.4%)	12(21.4%)	11(19.6%)	10(17.9%)	11(19.6%)
Group Discussion	13(23.2%)	15(26.8%)	13(23.2%)	10(17.9%)	5(8.9%)
Lecture	21(37.5%)	14(25%)	6(10.7%)	10(17.9%)	5(8.9%)
Field Trip	16(28.6%)	19(33.9%)	9(16%)	7(12.5%)	5(8.9%)
Demonstration	25(44.6%)	10(17.9%)	7(12.5%)	8(14.3%)	6(10.7%)

Source: Field Survey (2020)

From Table 6, Demonstration recorded the highest response 25 representing about 45% followed by Lecture which recorded 21 representing about 38%. Question and answers method 12 representing 21% was identified as the last followed by group discussion method 13 representing 23%. From the forgone, demonstration teaching method seems to be most used a head of others and might be more effective. But the result indicates that teaching requires a variety of methods depending on need of learners and circumstance. Despite recording 16 representing 28%, the field trip is strongly imbedded in Geography as the subject cannot only be taught in the four corners of the classroom. Surprisingly, the lecture method came second, although it is a teacher-centered method which is discouraged for more learner-centered techniques like question and answers. This corroborates the study of [Adunola \(2011\)](#) in Ijebu-Ode, Ogun State Nigeria where teachers are advised to be conversant with different teaching methods or techniques.

Table 7. Assessment of students' perception of the appropriateness of teaching methods

Understanding	Frequency	Percent (%)
I do understand	76	20.7
I partially understand	91	23.5
I am not clear	96	26.2
I do not understand	104	28.3
Total	367	100.0

Source: Field Survey (2020)

From Table 7, 104 of the respondents representing 28 which is more than a quarter say they do not understand the actual method used in teaching them. Up to 96 representing 26% are not clear about the method although they somehow manage to go along. This is worrisome considering the large numbers. This clearly shows more is needed to get the students to understand new techniques when introduced and get the teachers to introduce better techniques.

Hypothesis testing

Table 8. Pearson product moment correlation coefficient on impact of teaching method on performance of geography students

Variables	N	Mean	SD	r	P
Teaching method	423	11.8	3.1	-.671	.0001
Students performance in Geog.	423	7.4	3.4		

Table 8 reveals that a significant inverse relationship exists between teaching method and geography students' performance in Zaria LGA secondary schools $r=-.671$ and $p=.0001$. This is because the p-value .0001 is less than 0.05 level of significance. The correlation coefficient reveals that the poor the teaching method, the lower the performance of Geography students in Zaria LGA and vice-versa. Thus, the hypothesis which states that there is no significant impact of teaching method on performance of Geography students in Zaria LGA, Kaduna State, Nigeria, is hereby rejected. Thus, applying two or more teaching methods is good as identified by [Briggs \(2019\)](#) in his Port Harcourt LGA of Rivers State, Nigeria's study.

5. Conclusion

This study analyzed the impact of teaching method on Geography student's performance in Zaria LGA, Kaduna State, Nigeria. Teaching methods often used in secondary schools like demonstration, lecture, questions and answers, group discussion and field trip methods. The study finds the teachers of Geography qualifications. It also reveals the domination of male teachers and students in the study area over females. The study reveals some worrying information regarding students' perceptions concerning teaching methods as most students did not know the method used by teachers in teaching. The study also reveals the most used method applied by secondary school teachers. It also highlights the need for the combination of two or more teaching methods as circumstances dictate.

The finding reveals that teachers used any simple or suitable technique, ignoring students' need and requirement. When that is done, many students are not carried along or left behind. There should be a technique of finding the best approach for teaching students by school teachers. That would make teaching technique easier for teachers as well as improve the performance of student's. Additionally, teachers should be taught the best Geography teaching approach as obtained in more advanced countries. In doing so, all stakeholders involved in educational matters must play their roles. For instance, government at all levels is to finance the training and retraining of teachers. Teachers should be serious on the training and school heads to ensure that teachers apply the knowledge acquire when trained. More so, NCE holders dominate the teaching profession at this level; the Government of Kaduna State should employ more teachers with higher qualifications for their level training and experience is a head of those with NCE. This will make them understand the students' problems and make them appreciate the application of different teaching approaches.

Limitations and study forward

The study used not only Geography teachers as the respondents, but also subjects that have relationship with Geography. Subjects like Biology, Chemistry, Agricultural Science, Physics and Economics were included. Subsequent studies should focus on Geography teachers only. In addition, the study covers only Zaria Local Government Secondary Schools of Kaduna State. The scope and coverage should be increased to cover the whole of Kaduna State public schools.

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